

Fierce and Fierce XLT Evaluation in Soybean.

Trial ID: 12-51W-M80

Location: Belleville Res. Center

Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-22-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:

Evaluate crop tolerance and weed control from preemergence applications of Valor XLT, Fierce, and Fierce XLT in soybean.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 5-22-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant
Pest 2 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf
Pest 3 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 27 FT
Plot Area, Unit: 270 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOB L Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P205 50 LB/A, K20 150 LB/A

Soil Description

% OM: 1.8 **Texture:** SILSILT LOAM
pH: 6.5 **Soil Name:** PIERRON
CEC: 10

Additional Measured Elements

Element	Quantity	Unit
P1	56	LB/A
K	294	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

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No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A
Application Date:	5-24-12
Time of Day:	6:00
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	62 F
% Relative Humidity:	78
Wind Velocity, Unit:	6 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	69 F
Soil Moisture:	BELNOR
% Cloud Cover:	30
Next Rain Occurred On:	5-31-12

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Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBTR W DESC
Stage Majority, Percent:	NA
Pest 2 Code, Type, Scale:	IPOHE W DESC
Stage Majority, Percent:	NA
Pest 3 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval									GLXMA 10-22-12 Moisture Percent	GLXMA 10-22-12 Test wt. lb/bu	GLXMA 10-22-12 Yield bu/A	GLXMA 6-21-12 Injury Percent	GLXMA 7-5-12 Injury Percent	GLXMA 7-19-12 Injury Percent
									151 DA-A	150 DA-A	150 DA-A	28 DA-A	42 DA-A	56 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Unit	Growth Stage	Appl Code						
1	NONTREATED								14.5 a	56.0 a	55 c	0 a	0 a	0 a
2	VALOR SX	51 WG		0.096 lb ai/a	3 oz/a		PRE	A	14.0 a	56.2 a	76 ab	0 a	0 a	0 a
3	VALOR XLT	40.3 WG		0.0756 lb ai/a	3 oz/a		PRE	A	14.1 a	56.2 a	71 ab	0 a	0 a	0 a
4	VALOR XLT	40.3 WG		0.101 lb ai/a	4 oz/a		PRE	A	13.8 a	56.3 a	74 ab	0 a	0 a	0 a
5	FIERCE	76 WG		0.143 lb ai/a	3 oz/a		PRE	A	13.9 a	56.3 a	69 ab	0 a	0 a	0 a
6	FIERCE	76 WG		0.178 lb ai/a	3.75 oz/a		PRE	A	13.9 a	56.3 a	73 ab	0 a	0 a	0 a
7	FIERCE	76 WG		0.214 lb ai/a	4.5 oz/a		PRE	A	13.7 a	56.3 a	74 ab	0 a	0 a	0 a
8	FIERCE XLT	55.68 WG		0.139 lb ai/a	4 oz/a		PRE	A	13.5 a	56.5 a	71 ab	0 a	0 a	0 a
9	FIERCE XLT	55.68 WG		0.174 lb ai/a	5 oz/a		PRE	A	14.3 a	56.2 a	71 ab	0 a	0 a	0 a
10	FIERCE XLT	55.68 WG		0.209 lb ai/a	6 oz/a		PRE	A	13.7 a	56.3 a	72 ab	0 a	0 a	0 a
11	GANGSTER (CO-PACK) GANGSTER FR GANGSTER V	84 WG 51 WG		0.0315 lb ai/a 0.096 lb ai/a	3.6 oz/a		PRE PRE PRE	A A A	13.9 a	56.3 a	78 a	0 a	0 a	0 a
12	AUTHORITY XL	70 WG		0.175 lb ai/a	4 oz/a		PRE	A	14.0 a	56.2 a	74 ab	0 a	0 a	0 a
13	AUTHORITY FIRST	70 WG		0.282 lb ai/a	6.45 oz/a		PRE	A	14.2 a	56.1 a	67 b	0 a	0 a	0 a
14	OPTILL PRO (CO-PACK) OPTILL OUTLOOK	68 WG 6 EC		0.085 lb ai/a 0.47 lb ai/a	2 oz/a 10 fl oz/a		PRE PRE PRE	A A A	14.0 a	56.3 a	74 ab	0 a	0 a	0 a
15	ANTHEM	2.15 SE		0.134 lb ai/a	8 fl oz/a		PRE	A	14.0 a	56.2 a	69 b	0 a	0 a	0 a
LSD (P=.05)									0.96	0.34	9.0	0.0	0.0	0.0
Standard Deviation									0.57	0.20	5.4	0.0	0.0	0.0
CV									4.11	0.36	7.59	0.0	0.0	0.0
Replicate F									0.064	0.157	0.383	0.000	0.000	0.000
Replicate Prob(F)									0.9386	0.8552	0.6855	1.0000	1.0000	1.0000
Treatment F									0.634	0.811	2.935	0.000	0.000	0.000
Treatment Prob(F)									0.8139	0.6521	0.0074	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Trt Treatment No. Name							28 DA-A	42 DA-A	56 DA-A	28 DA-A	42 DA-A	56 DA-A
Form Conc	Form Type	Rate	Other Rate	Other Rate	Growth Unit	Appl Code						
1	NONTREATED						0 g	0 f	0 e	0 e	0 f	0 e
2	VALOR SX	51 WG	0.096 lb ai/a	3 oz/a	PRE	A	20 def	23 bcd	20 bcd	30 cd	32 cde	37 a-d
3	VALOR XLT	40.3 WG	0.0756 lb ai/a	3 oz/a	PRE	A	23 cde	13 c-f	3 de	32 cd	20 ef	17 de
4	VALOR XLT	40.3 WG	0.101 lb ai/a	4 oz/a	PRE	A	35 abc	25 bc	15 b-e	47 bc	37 b-e	33 a-d
5	FIERCE	76 WG	0.143 lb ai/a	3 oz/a	PRE	A	7 fg	7 ef	3 de	30 cd	23 de	23 cd
6	FIERCE	76 WG	0.178 lb ai/a	3.75 oz/a	PRE	A	28 bcd	30 ab	25 abc	43 bcd	27 cde	17 de
7	FIERCE	76 WG	0.214 lb ai/a	4.5 oz/a	PRE	A	30 a-d	25 bc	15 b-e	60 ab	37 b-e	27 cd
8	FIERCE XLT	55.68 WG	0.139 lb ai/a	4 oz/a	PRE	A	32 a-d	27 abc	30 ab	53 b	37 b-e	30 bcd
9	FIERCE XLT	55.68 WG	0.174 lb ai/a	5 oz/a	PRE	A	35 abc	20 b-e	20 bcd	48 bc	47 abc	40 abc
10	FIERCE XLT	55.68 WG	0.209 lb ai/a	6 oz/a	PRE	A	40 ab	40 a	40 a	75 a	58 ab	53 a
11	GANGSTER (CO-PACK) GANGSTER FR GANGSTER V	84 WG 51 WG	0.0315 lb ai/a 0.096 lb ai/a	3.6 oz/a	PRE PRE PRE	A A A	43 a	30 ab	30 ab	75 a	63 a	50 ab
12	AUTHORITY XL	70 WG	0.175 lb ai/a	4 oz/a	PRE	A	35 abc	30 ab	30 ab	40 bcd	43 a-d	45 abc
13	AUTHORITY FIRST	70 WG	0.282 lb ai/a	6.45 oz/a	PRE	A	30 a-d	10 def	10 cde	60 ab	47 abc	30 bcd
14	OPTILL PRO (CO-PACK) OPTILL OUTLOOK	68 WG 6 EC	0.085 lb ai/a 0.47 lb ai/a	2 oz/a 10 fl oz/a	PRE PRE PRE	A A A	13 efg	13 c-f	20 bcd	23 d	20 ef	17 de
15	ANTHEM	2.15 SE	0.134 lb ai/a	8 fl oz/a	PRE	A	0 g	0 f	0 e	0 e	0 f	0 e
LSD (P=.05)							14.1	14.4	17.1	20.5	22.4	23.1
Standard Deviation							8.3	8.5	10.0	12.3	13.4	13.8
CV							33.45	43.22	57.55	29.83	41.08	49.56
Replicate F							0.220	0.031	3.313	0.956	2.193	4.016
Replicate Prob(F)							0.8042	0.9694	0.0572	0.3964	0.1304	0.0293
Treatment F							8.436	5.906	4.535	10.372	5.630	4.091
Treatment Prob(F)							0.0001	0.0002	0.0012	0.0001	0.0001	0.0007

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval							AMATA 6-21-12 Control Percent 28 DA-A	AMATA 7-5-12 Control Percent 42 DA-A	AMATA 7-19-12 Control Percent 56 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Unit	Growth Stage	Appl Code	
1	NONTREATED								0 c 0 d 0 e
2	VALOR SX	51 WG		0.096 lb ai/a	3 oz/a		PRE A		98 a 98 a 96 ab
3	VALOR XLT	40.3 WG		0.0756 lb ai/a	3 oz/a		PRE A		99 a 97 ab 96 ab
4	VALOR XLT	40.3 WG		0.101 lb ai/a	4 oz/a		PRE A		93 ab 91 ab 90 abc
5	FIERCE	76 WG		0.143 lb ai/a	3 oz/a		PRE A		99 a 98 a 95 ab
6	FIERCE	76 WG		0.178 lb ai/a	3.75 oz/a		PRE A		99 a 99 a 99 a
7	FIERCE	76 WG		0.214 lb ai/a	4.5 oz/a		PRE A		99 a 98 a 99 a
8	FIERCE XLT	55.68 WG		0.139 lb ai/a	4 oz/a		PRE A		99 a 97 ab 91 abc
9	FIERCE XLT	55.68 WG		0.174 lb ai/a	5 oz/a		PRE A		99 a 97 ab 93 ab
10	FIERCE XLT	55.68 WG		0.209 lb ai/a	6 oz/a		PRE A		99 a 99 a 99 a
11	GANGSTER (CO-PACK) GANGSTER FR GANGSTER V	84 WG 51 WG		0.0315 lb ai/a 0.096 lb ai/a	3.6 oz/a		PRE A PRE A PRE A		99 a 99 a 99 a
12	AUTHORITY XL	70 WG		0.175 lb ai/a	4 oz/a		PRE A		99 a 95 ab 85 abc
13	AUTHORITY FIRST	70 WG		0.282 lb ai/a	6.45 oz/a		PRE A		88 b 86 bc 73 cd
14	OPTILL PRO (CO-PACK) OPTILL OUTLOOK	68 WG 6 EC		0.085 lb ai/a 0.47 lb ai/a	2 oz/a 10 fl oz/a		PRE A PRE A PRE A		96 ab 88 abc 80 bcd
15	ANTHEM	2.15 SE		0.134 lb ai/a	8 fl oz/a		PRE A		87 b 78 c 63 d
LSD (P=.05)							10.4	11.3	18.7
Standard Deviation							6.2	6.8	11.2
CV							6.88	7.7	13.31
Replicate F							1.378	2.875	2.952
Replicate Prob(F)							0.2686	0.0732	0.0686
Treatment F							49.835	41.032	15.647
Treatment Prob(F)							0.0001	0.0001	0.0001

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Trial Comments

1. Protocol: Valent (Fierce MD 64.01).
2. Ratings: CI/WC at 28, 42, and 56 DAT.
3. Blanket application of glyphosate at 56 DAT.
4. Yield.
5. Rainfall following the PRE application was 0.28 inch 7 days later and 0.75 inch 18 days later.
6. Harvested 10-22-12, (2) 30 inch rows by 24 ft.